

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-5. (cancelled)

6. (currently amended) ~~The semiconductor device according to claim 1, A~~

semiconductor device made by providing on a substrate an active region that functions as a portion of an active element,

wherein the active region is configured by alternately layering:

first semiconductor layers provided in plurality which function as a carrier transit region, and

second semiconductor layers, which are composed of δ doped layers provided in plurality, which include a higher concentration of impurities for carriers than the first semiconductor layer, and which have a thinner film thickness than the first semiconductor layers,

wherein the first semiconductor layers and the second semiconductor layers are made of the same material,

wherein each of the first semiconductor layers has the same thickness,

wherein the concentration of impurities for carriers included in the second semiconductor layers is substantially constant,

wherein the second semiconductor layers are a SiC layer, and

wherein the thickness of ~~the one of said~~ second semiconductor ~~layer~~layers is at least one monolayer and below 20 nm.

7. (currently amended) ~~The semiconductor device according to claim 1, A~~
semiconductor device made by providing on a substrate an active region that functions
as a portion of an active element,

wherein the active region is configured by alternately layering:

first semiconductor layers provided in plurality which function as a carrier transit
region, and

second semiconductor layers, which are composed of δ doped layers provided in
plurality, which include a higher concentration of impurities for carriers than the first
semiconductor layers, and which have a thinner film thickness than the first
semiconductor layers,

wherein the first semiconductor layers and the second semiconductor layers are
made of the same material,

wherein each of the first semiconductor layers has the same thickness,

wherein the concentration of impurities for carriers included in the second
semiconductor layers is substantially constant,

wherein the first semiconductor ~~layers are~~layer is a SiC ~~layer~~layers, and

wherein the thickness of ~~the one of said~~ first semiconductor ~~layer~~layers is at least
about 10 nm and at most about 100 nm.

8. (cancelled)

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(currently amended) ~~The semiconductor device according to claim 1,~~
~~further comprising:~~ A semiconductor device made by providing on a substrate an active
region that functions as a portion of an active element,

wherein the active region is configured by alternately layering:

first semiconductor layers provided in plurality which function as a carrier transit
region, and

second semiconductor layers, which are composed of δ doped layers provided in
plurality, which include a higher concentration of impurities for carriers than the first
semiconductor layers, and which have a thinner film thickness than the first
semiconductor layers,

wherein the first semiconductor layers and the second semiconductor layers are
made of the same material,

wherein each of the first semiconductor layers has the same thickness,

wherein the concentration of impurities for carriers included in the second
semiconductor layers is substantially constant, and

wherein the semiconductor device further comprises a Schottky electrode
providing a Schottky contact with a first lateral face of the first semiconductor layer
layers and of the second semiconductor layer layers of the active region, and

an electrode that is connected to a second lateral face of the first semiconductor
layer layers and of the second semiconductor layer layers of the active region, the
second lateral face being arranged at a certain spacing from the first lateral face.

~~4~~ 10. (currently amended) The semiconductor device according to claim ~~2~~³,
further comprising a doped layer for connecting lead, which is formed by introducing a
high concentration of impurities into a region of the active region that is at a certain
spacing from the first lateral face of the first semiconductor ~~layer~~layers and the second
semiconductor ~~layer~~layers, and wherein the electrode is in ohmic contact with the
doped layer for connecting lead.

Done
11-12. (cancelled)
